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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,539	10/24/2003	Dany Sylvain	7000-271A	2302
27820 7590 01/28/2010 WITHROW & TERRANOVA, P.L.L.C. 100 REGENCY FOREST DRIVE SUITE 160 CARY, NC 27518			EXAMINER KIM, WESLEY LEO	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 01/28/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/693,539

**Applicant(s)**

SYLVAIN, DANY

**Examiner**

WESLEY L. KIM

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4-23 and 25-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-23 and 25-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is in response to Amendments filed 12/11/09.
2. Claims 1-2, 4-23, and 25-42 are pending in the Current Office Action.
  - Claims 1-2, 4, 7-9, 11, 21-23, 25-27, 29, and 40-42 are currently amended.
  - Claims 3 and 24 were previously cancelled.
  - This action is made Non-Final as being the first action after an RCE.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-2, 4-23, and 25-42 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 11-16, 18-19, 21-23, 25-26, 29-34, 36-37, and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar et al (US 2003/0134650 A1) in view of Malmstrom (US 5901359) and Akhavan (US 5920815).

**Regarding Claims 1, 11, 22, and 29**, Sundar teaches a) a wireline network interface (Fig.3:112 and Fig.3:120); b) a local wireless interface providing a communication zone in which communications with a mobile terminal are possible (Fig.5:Access Point 204), the mobile terminal associated with a primary directory

number associated with a wireline network (Par.21-23 and Par.96, obviously there is a primary directory number so that the mobile station can be contacted while in the LAN which is a wireline network) and adapted to communicate with the local wireless interface to facilitate a call through the wireline network (Fig.5: LAN) and communicate with a cellular wireless network to facilitate a call through the cellular wireless network (Par.96, mobile station can roam and communicate with WWAN); and c) a control system cooperating with the wireline network interface and the local wireless interface (Fig.5: MSC 302) and adapted to: i) use the primary directory number associated with the wireline network to establish through the wireline network a first call involving the mobile terminal by communicating with the wireline network via the wireline network interface (Par.21-23 and Par.96, obviously there is a primary directory number so that the mobile station can be contacted while in the LAN which is a wireline network) and communicating with the mobile terminal via the local wireless interface (Fig.5: Access Point 204 is used so the mobile terminal communicates with the local wireless interface); ii) during the first call (Par.23), detect the mobile terminal moving out of the local wireless communication zone (Par.96:lines 9-16); and iii) initiate a transition of the first call being connected to the mobile terminal through the wireline network via the local wireless interface to the first call being connected to the mobile terminal through the cellular wireless network using a temporary directory number (Par.96: handover is initiated through cellular network using TLDN) provided by a wireless switch currently providing wireless access for the mobile terminal (Par.96,

temporary directory number is provided by wireless switch (i.e. MSC of WLAN)),  
however **Sundar does not expressly teach** a primary directory number associated with the wireline network.

Malmstrom teaches that it is well known in the art that a primary directory number may be associated with a wireline network (Col.10:lines 43-45). Clearly, when the subscriber roams into a wireless network, the subscriber is provided service by utilizing a temporary directory number (Col.11:lines 5-20). Therefore, one of ordinary skill in the art would have found it obvious to modify Sundar with Malmstrom at the time of the invention such that a primary directory number associated with the wireline network so that a user may be provided with the best service at the lowest possible cost, since wireline networks are cheaper than wireless. However **Sundar and Malmstrom do not expressly teach** that a temporary directory number is provided by a visited wireless switch currently providing wireless access for the mobile terminal.

Akhavan teaches a well known concept in the art that when a subscriber roams into an area serviced by a foreign network (i.e. foreign MTSO) that the subscriber must place a request with the foreign network so that the foreign network will send a temporary directory number to the home network so that the mobile station may have calls supported in the foreign network (Col.14:lines 13-25). Since Sundar already teaches that it is well known in the art that a mobile station may request a home network to provide it a TLDN when roaming to a foreign network (Par.96:lines 18-25) and Akhavan teaches that a mobile station

may request a foreign network to issue it a TLDN to use (Col.14:lines 13-25) a skilled artisan would realize that there are two possibilities and therefore it would have been obvious to modify Sundar and Malmstrom with the teachings of Akhavan since it would have been obvious to try one method over another method since there are only two possibilities, therefore the mobile station may be provided with a temporary directory number so that it may be provided network services even when roaming, this way a user may be provided with the best possible quality of service.

**Regarding Claims 2 and 23,** By the combined teachings of Sundar, Malmstrom, and Akhavan, it is known that a first call is transitioned between a wireline and wireless network (See rejection of Claims 1 and 22) and Akhavan further teaches the mobile terminal is registered with the wireless network while the first call is established (Col.14:lines 6-8 and Col.14:lines 13-25, automatic registration of roaming subscribers is known) and Akhavan teaches the temporary directory number is assigned to the mobile terminal by the wireless switch upon registration (Col.14:lines 6-8 and Col.14:lines 13-25, automatic registration of roaming subscribers is prior art and a request for a temporary directory will occur after registration).

**Regard Claims 4 and 25,** Sundar further teaches the transition is initiated by sending a message configured to initiate establishing a wireless network connection to the mobile terminal through the wireless network using the temporary directory number associated with the mobile terminal (Par.96:lines 30-

36, request (i.e. message) is made for transition to be initiated through WWAN using TLDN); connecting the first call to the wireless network connection (Par.96:lines 33-39), and dropping a wireline network connection with the mobile terminal (Par.71:lines 9-11).

**Regarding Claim 5**, Sundar teaches the wireline network interface is a traditional telephony line interface (Fig.3:112, PSTN).

**Regarding Claim 6**, Sundar teaches the wireline network interface is a voice over packet interface (Fig.3:120, IP indicates that voice would be transmitted as voice over packet on this interface).

**Regarding Claim 7**, Sundar teaches the cellular wireless network is of CDMA (Par.13).

**Regarding Claims 8, 21, 26, and 40**, Sundar teaches the transition is initiated by sending a message intended for a wireline switch and configured to cause the wireline switch to transfer the first call to the mobile terminal through the wireless network using the temporary directory number (Par.96:lines 30-36 and Par.22 and Par.102, request is message intended for wireline switch).

**Regarding Claims 12 and 30**, Sundar teaches the control system includes signal processing function adapted to provide any necessary conversion of signals between the wireline network interface and the local wireless interface (Par.53, voice coding technology).

**Regarding Claims 18-19 and 36-37**, Sundar teaches the local wireless interface is adapted to support communications with the mobile terminal using 802.11 wireless local area network telephone technology (Par.9 and Fig.3: LAN).

**Regarding Claim 39**, Sundar teaches inserting a signal in the voice path for the first call prior to initiating the transition to warn parties to the first call of transfer (Par.96:lines 28-30).

**Regarding Claims 13-16 and Claims 31-34**, Sundar teaches that a mobile station determines the mobile station moving out of the communication zone by detecting bit error rate, a degradation in quality, an inability to communicate with the mobile terminal, a decrease in signal strength associated with communications with the mobile terminal via the local interface surpassing a defined threshold (Par.96) however **the combination of Sundar, Malmstrom, and Akhavan do not expressly teach** that the control system performs the detection.

The examiner takes **OFFICIAL NOTICE** that it is very well known in the art that power control (i.e. detection of handover based on signal strength) is capable of being performed at the mobile station or at the network side (i.e. MSC/ control system). Therefore to one of ordinary skill in the art, it would have been obvious to modify Sundar, Malmstrom, and Akhavan such that the control system performs the detection to provide a method where the mobile station wastes less resources by allowing the network to perform the detection of when a handover is necessary, by wasting less resources the network would be able to provide better service to users with less congestion.



6. Claims 9-10 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar et al (US 2003/0134650 A1), Malmstrom (US 5901359), and Akhavan (US 5920815) in further view of Schellinger et al (US 5260988).

**Regarding Claims 9 and 27**, Sundar, Malmstrom, and Akhavan teach all the limitations as recited in Claims 1, and 22, and Sundar teaches sending a message intended for a wireline switch (Par.96:lines 30-36), however **the combinaton does not expressly teach** causing the wireline switch to establish a three-way call based on the first call to the mobile terminal through the cellular wireless network using the temporary directory number.

Schellinger teaches that it is well known in the art that a transition is initiated by sending a message (Col.8:30, i.e. request) intended for a wireline switch (Col.8:30-31) and configured to cause the wireline switch to establish a three-way call (Col.8:32-34) based on the first call to the mobile terminal through the cellular wireless network using the temporary directory number (Col.8:29-34, i.e. the TLDN/cellular telephone number). This concept of utilizing a TLDN in a 3-way call to transition between a wired to a wireless network is known as can be seen in Schellinger.

To a skilled artisan, it would have been obvious to modify Sundar, Malmstrom, and Akhavan with Schelling at the time of the invention, such that the wireline switch to establish a three-way call based on the first call to the mobile terminal through the wireless network using the temporary directory number, to provide a method where a call can be handed off as it roams between different

networks so that a users on-going communication can continue with the least amount of interruption.

**Regarding Claims 10 and 28**, Sundar teaches a second message intended for the wireline switch and configured to instruct the wireline switch to drop a wireline network connection (Par.71:lines 9-11).

7. Claims 20 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar et al (US 2003/0134650 A1), Malmstrom (US 5901359), and Akhavan (US 5920815) in further view of Hamalainen et al (US 2002/0061744 A1).

**Regarding Claims 20 and 38**, Sundar, Malmstrom, Akhavan teaches all the limitations as recited in claims 1 and 22, however **the combination does not expressly teach** the local wireless interface is adapted to support communications with the mobile terminal using Bluetooth.

Hamalainen teaches that a local wireless interface is adapted to support communication with a mobile terminal using Bluetooth (Par.20).

Therefore, to a skilled artisan it would have been obvious to modify Sundar, Malmstrom, and Akhavan with Hamalainen such that the local wireless interface is adapted to support communications with the mobile terminal using Bluetooth, to provide a low cost method of short range wireless voice and data links between devices.

8. Claims 17 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar et al (US 2003/0134650 A1), Malmstrom (US 5901359), and Akhavan (US 5920815) in further view of Charney et al (US 2004/0132485 A1).

**Regarding Claims 17 and 35**, Sundar, Malmstrom, and Akhavan teaches all the limitations as recited in Claims 1 and 22, **however the combination does not expressly teach** that the local wireless interface is adapted to support communications with the mobile terminal using cordless telephone technology.

Charney teaches that it is well known in the art that a wireless LAN and access points provide data services by a cordless telephone (Par.28 and Fig.4).

Therefore, to a skilled artisan it would have been obvious to modify Sundar, Malmstrom, and Akhavan with Charney, such that that the local wireless interface is adapted to support communications with the mobile terminal using cordless telephone technology, to provide a method where a dual mode phone may operate in a wireline system when possible so that the lowest cost may be incurred for service.

9. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar et al (US 2003/0134650 A1), Malmstrom (US 5901359), and Akhavan (US 5920815) in further view of Ginter (US 5579375).

**Regarding Claims 41 and 42**, Sundar, Malmstrom, and Akhavan teach all the limitation as recited in Claims 1 and 22, however **the combination does not expressly teach** a visiting location register is associated with the visited wireless switch and accesses the temporary directory number from the visited wireless switch and provides the temporary directory number directly or indirectly via a home location register to a wireline switch in the wireline network.

Ginter teaches that it is well known in the art that a visiting location register is associated with a wireless switch and accesses the temporary directory number from the wireless switch and provides the temporary directory number directly or indirectly via a home location register to an initiating wireless switch in another wireless network (Col.8:lines 45-65). To a skilled artisan, this concept of obtaining temporary directory numbers is well known in the art and is applicable to different systems (i.e. wireless/wireline).

Therefore, to a skilled artisan it would have been obvious to modify Sundar, Malmstrom, and Akhavan with Ginter such that a visiting location register is associated with the wireless switch and accesses the temporary directory number from the wireless switch and provides the temporary directory number directly or indirectly via a home location register to a wireline switch in the wireline network, to provide a method where a user may be allowed to roam while making calls without having the call be disrupted.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WESLEY L. KIM whose telephone number is (571)272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wesley L Kim/  
Examiner, Art Unit 2617